



ACQUISITION,  
TECHNOLOGY  
AND LOGISTICS

## THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3010

AUG 15 2006

Honorable Deborah Platt Majoras  
Chairman  
Federal Trade Commission  
600 Pennsylvania Avenue, NW  
Washington, DC 20580

Dear Ms. Majoras:

The Department of Defense has reviewed thoroughly the proposed United Launch Alliance LLP (ULA) joint venture to be formed by combining the launch vehicle business units of Boeing and Lockheed Martin. We believe that the proposed joint venture presents both competition and national security issues.

Because the interests of the Department of Defense are usually best served by maintaining competitive markets for required products and services, it is our policy to oppose business combinations that severely reduce or eliminate competition or that may create unhealthy or unfair competition in those products and services. Indeed, we have reviewed the Federal Trade Commission staff's analysis of the proposed transaction's likely effects, and acknowledge that the most negative view of the creation of ULA is that it will almost certainly have an adverse effect on competition, including higher prices over the long term, as well as a diminution in innovation and responsiveness. Although the parties assert that the joint venture would generate significant savings for the Department of Defense, our careful review of those savings leads us to conclude that the cost savings, while attractive, are not adequate to support the loss of competition. The transaction does, however, present very unique national security benefits that in the Department's analysis clearly outweigh the loss of competition, even in the most extreme view of that loss. For that reason, we have concluded that the proposed joint venture offers advantages over the status quo.

Although we believe ULA is in the best interests of U.S. national security, the Department is concerned that the transaction may cause, absent remedy, certain competitive harms without any attendant benefit to national security. Specifically, the Department is concerned ULA might advantage Boeing and Lockheed Martin's satellite businesses by refusing to cooperate with third party satellite manufacturers. Also, in certain circumstances where Boeing and Lockheed Martin have responsibility to choose a



launch vehicle, we are concerned that the parties would have the incentive to steer all business to ULA, thereby making it more difficult for nascent suppliers of launch vehicles to enter the business. Finally, we have concerns that ULA may facilitate the flow of confidential information between competitors in the satellite and launch services markets. For these reasons, we have sought the Commission's assistance in creating a consent order to limit these adverse effects of the transaction that do not have any corresponding national security advantages. While we generally oppose, as insufficient, the introduction of behavioral remedies or mechanisms to resolve competitive problems, preferring instead to rely on market forces to protect competition, we believe that a consent order governing ULA's conduct is appropriate and necessary in order to preserve the national security advantages of the transaction.

Maintaining assured access to space is essential to our national security. Recent wartime operations demonstrate the military's increased dependence on space systems. Today, space enables military capability. Precision-guided munitions, for example, are not just guided by space-based GPS satellites, but their targets are often located using space-based reconnaissance assets, and the related communication often takes place over space-based communication links. The U.S. can no longer protect national security without space. Assuring these capabilities by placing satellites on-orbit, in the right location and on time is critical.

To avoid losing the ability to launch critical national security payloads, the National Space Transportation Policy requires the Department to sustain two evolved expendable launch vehicles (EELV) until the Department can certify assured access to space through reliance in a single vehicle. The Department cannot yet accept the risks of only one of the EELV launch vehicle families because they are relatively new, unproven systems with limited flight experience. A single supplier might achieve some of the cost saving benefits projected by the companies with ULA, but a single launch vehicle presents unacceptable risk to national security for the foreseeable future.

Two launch vehicle families preserve the ability to launch a national security payload following a launch failure. On the average, it takes the supplier seven months to recover from a launch failure if there is only one launch vehicle family. The time to return the failed vehicle to flight has ranged from three to 23 months - an unacceptably long vulnerability for national security. With two families of vehicles, a replacement satellite can be launched on an alternate vehicle. This can be achieved without ULA, but the joint venture will enhance our ability to reassign a payload from one family to the other by eliminating the time needed to negotiate a second contract. Moreover, a single launch service provider can improve the common interface (dual integration) process by using a single, unified, engineering team.

The current and future commercial launch market, including the inability of U.S. firms to compete against foreign firms coupled with the low number of national security launches, makes it extremely difficult for two competing U. S. providers to maintain separate, competing, experienced workforces. ULA will offer two distinct families of launch vehicles with a single, more efficient workforce, thereby enhancing assured access to space. Launch presents significant risk to a payload, and fifty years of launch experience teaches that risk is reduced when the launch is supported by an experienced workforce with recent launch experience. The single ULA workforce will benefit from a launch tempo, defined as the number of booster cores built in the assembly line and launched per year, that would be greater than could be expected for either of two competing workforces.

Because payloads are typically many times more expensive than their launch vehicles, and because it is the payload on orbit that is essential to national security, the reliability of launch infrastructure is critical. A single pool of talent may improve the resolution of anomalies and, at least in the near term, infuse each launch vehicle design with the technical improvements and innovation of its former competitor. ULA's ability to bring the best manufacturing techniques of each company into the Decatur, Alabama plant should increase manufacturing reliability, just as combining launch teams at both coast launch sites will provide the experience critical to launch success. We have concluded that the joint venture is consistent with our national security requirements, because it fosters increased launch reliability notwithstanding the declining demand for medium and heavy lift launches.

In order to ensure the Department achieves the national security benefits, the companies need to retain their critical capabilities through the transition and relocation of key employees. While a significant number of the jobs will relocate to their proposed locations of Denver, Colorado and Decatur, Alabama. There will be some employees who will choose not to move. We are concerned that these employees remain with the launch vehicle operations to provide the quality, reliability, innovation, and "best of breed" benefits to the Department. It is our understanding that the companies will provide retention incentives for key and critical employees to relocate.

To address the specific concerns raised by the Department, Commission staff have negotiated a consent order with the parties. The Department has reviewed the proposed consent order and believes that it will help to limit the extent of the ancillary competitive harm suffered by the Department. The order will ensure that ULA affords other satellite manufacturers nondiscriminatory treatment and that Boeing and Lockheed Martin, as satellite manufacturers, consider other launch vehicle providers on a nondiscriminatory basis. The order also requires firewalls to prevent information from a satellite or other

launch vehicle provider from being shared by ULA with its Boeing or Lockheed Martin parent. The consent order includes a provision for a Compliance Officer with the power and authority to oversee Boeing, Lockheed Martin, and ULA compliance with the consent order

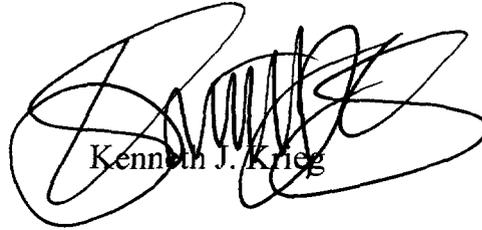
The Department's new EELV acquisition strategy increases its visibility into the costs of performing the services and provides contract incentives to reduce costs, explore innovation, and gain efficiencies. For instance, we are instituting a number of changes to our strategy for acquiring launch services, no longer relying on the commercial approach described in Part 12 of the Federal Acquisition Regulation. Instead, we will obtain auditable, certified cost or pricing data to use in establishing prices or estimated costs and will employ award fees and mission success incentives to encourage cost control, innovation, and efficiency. The consent order will also facilitate this effort by providing additional access to books, records, and people, which will further enable us to assure that costs are fair and reasonable. We believe that adequate oversight coupled with a prudent acquisition strategy can deliver the benefits of the joint venture while limiting the competitive risk associated with it. The combination of the consent order and modifications in our procurement strategy should give DOD program and contracting officials the tools required to monitor ULA's performance and, if necessary, correct it.

It is U.S. policy to launch Government payloads on space launch vehicles manufactured in the United States. While the Atlas V and Delta IV are currently the only launch vehicles capable of meeting current requirements, the Department is open to new U.S. competitors for the launch services. The EELV acquisition strategy provides an annual opportunity for new competitors to qualify for launch service contracts by responding to the annual Notification of Contracting Action, which sets forth the details of the qualification process and is published prior to each year's Request for Proposals.

The national security advantages of ULA are paramount to the Department's support of the transaction. Indeed, the national security interests present in this transaction distinguish the Department's analysis of this transaction from our analysis of the 2001 acquisition of Newport News Shipbuilding by General Dynamics, which would have resulted in a nuclear shipbuilding monopoly. Although that transaction may have had the potential to offer some of the same benefits as ULA, including the consolidation of workforces and technological know-how, it did not advance the same national security interests. ULA will increase launch tempo, thereby improving the most important factor in launch vehicles - reliability. The General Dynamics - Newport News transaction would not have had the same impact on one of the critical factors in nuclear shipbuilding. Thus, the acquisition of Newport News Shipbuilding offered no national security interest to support foreclosing competition and the Department recommended against approval of the proposed merger.

Additional information on the national security implications of the ULA is provided in the enclosure. In light of the national security implications and the unique circumstances in this product market, we ask that the Federal Trade Commission allow the transaction to proceed subject to the consent order negotiated by Commission staff.

Sincerely,



Kenneth J. Krieg

Enclosure:  
As stated

## Background Information on National Security Space for ULA

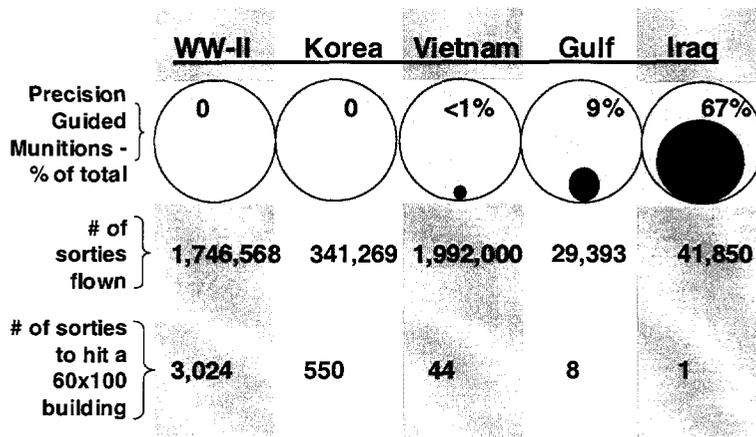
In today's era of rapid response to worldwide contingencies, warfighters depend on space-based capabilities across the entire spectrum of combat. Space systems satisfy critical requirements for navigation, strategic and tactical communication, intelligence, surveillance, reconnaissance, weather forecasting, environmental monitoring, missile warning and battlespace characterization. Space-based remote sensing satellites identify and locate targets. Weather satellites provide input into mission planning and weapon system selection. Satellite communication systems are used for command, control, and communication throughout the mission. Remote sensing satellites are also used for post-mission battle damage assessment and re-attack planning. The entire warfighting effort takes place under the protective umbrella of timely and accurate spaced-based missile warning reporting for land and sea based missile defense. All of these satellite systems, providing the support today's warfighter needs, require EELV to reach orbit (Figure 1).



Figure 1 – Space systems relying on EELV

DOD precision strike capabilities rely directly on space systems. Use of precision-guided weapons has grown dramatically in recent decades due to the availability of space systems (see figure 2). From the growth curve of precision weapons use from less than 1% in Vietnam to over 67% in Iraqi Freedom it is clear that warfighter

use of space systems is an essential aspect of our current combat capabilities. Future weapons systems will increasingly be linked through satellite communications systems and will use data from space-based global positioning and navigation systems and space-based remote sensing systems. Thus, the need for the DOD to maintain assured access to space will continue to be critical to national security.



**Space Systems are Key Enablers for Precision Strike**

Figure 2 – Precision strike capabilities<sup>1</sup>

The nation’s reliance on space systems translates into a requirement for a robust and reliable launch system to place these assets in orbit when they are needed. For the strategic national assets launched by the EELV, the cost of the payload far exceeds the cost of the launch vehicle. Individual satellites are typically part of a larger constellation of satellites that support a given mission. Each satellite is a critical node in its network, and the national security space missions are very sensitive to satellite outages. Given these factors, the availability of launch systems and the reliability of any given launch vehicle are of paramount consideration for the launch component of national security space.

Until the advent of the EELV program, the US Government relied on several different heritage launch vehicles for its access to space. These included the Titan II and Delta II vehicle for medium payloads, Atlas II for intermediate payloads, and Shuttle (until 1986) and later Titan IV for heavy payloads. The grounding of any given vehicle for a period of time would disrupt the access to space only for a given payload class. In

<sup>1</sup> NY Times 20 Apr 03

the last twenty years, the United States has experienced space launch down time ranging from 8 months for the Delta II failure (Jan 97) to 32 months for the Challenger Shuttle disaster (Jan 86).

The Air Force initiated the EELV program to replace the heritage Titan II, Titan IV, Atlas II, and Delta II space launch vehicles with two families of modernized launch vehicles that would provide greater operational flexibility while reducing the cost of launch services by at least 25%. The EELV two-family launch system mitigates the risk of down time due to design flaws and operational issues. The systems provide a mutual back-up capability, thus increasing the ability of the DOD to meet U.S. space launch requirements. Launch failures of Proton (Feb 06), Soyuz (Oct 02), and Ariane V (Jan 03) space launch systems demonstrate that this is a significant concern in the worldwide launch industry.

To provide for the nation's ability to maintain access to space following a launch failure, the National Space Transportation Policy (NSTP) directs the Department to maintain two families of launch vehicles until the Department certifies that a capability exists that reliably provides assured access to space without two EELV providers. The NSTP defines assured access as a "...sufficiently robust, responsive, and resilient capability to allow continued space operations, consistent with risk management and affordability."

Given the collapse of the commercial launch market, and the competition from subsidized foreign launch vehicles, the launch rate for each EELV family is at a minimum supportable level from both business case and launch reliability standpoints. US government experience with launch systems indicates that maintaining a robust launch operations tempo – the rate at which rockets are built and launched – improves mission assurance, that is, the success rate of the launches. Historical data (1973 – 2003) for both Delta II and Atlas II launches demonstrate that the statistical likelihood for launch failure is reduced as launch rate increases. At current launch rates for the Delta IV and Atlas V systems, the launch rate for each team is in the zone where the failure rate is statistically unacceptable. Forecasts for government and commercial launch opportunities show no growth in this rate through the life of the EELV program.

The formation of the ULA is the best way for the government to meet its national security space launch requirements. The joint venture meets the immediate requirement for assured access to space with two EELV families by continuing to produce both Atlas V and Delta IV launch vehicles. However, mission assurance and launch reliability for EELV will be improved from the status quo by the manufacturing, and launch team restructuring proposed under the ULA joint venture. While increased operations tempo will provide immediate tangible benefits, the Department also expects benefits from the cross-fertilization of ideas and methods between the two previously separated engineering and manufacturing teams.

With the approval of the ULA merger, the EELV contractors will form a single engineering team in Denver, Colorado. The ability to address launch vehicle issues with

the combined engineering intellectual capital of the new companies improves the ability to both prevent and resolve engineering issues. For example, a recent problem with the Boeing Delta IV battery design was resolved by using batteries developed by Lockheed Martin. However, the effort was delayed over two months while contractual issues between the companies were worked out. ULA would have completely alleviated this delay and potentially could've resolved the issue before it delayed launches.

Combining all EELV manufacturing operations at Decatur, Alabama will fully utilize the world's most modern rocket manufacturing plant. It will ensure the ability to cross-flow manufacturing techniques and procedures that yield increased manufacturing quality for both families of vehicles because of increased throughput. It allows for the incorporation of new manufacturing techniques such as the new friction stir welding techniques from the Delta family into the Atlas production process. The Department needs to maintain a continuous flow of launch vehicles through the assembly line to ensure vehicle quality and reliability. Since the Department is not ready to certify that that it can achieve assured access to space with one launch vehicle family, the consolidation of manufacturing will increase the facilities throughput and result in increasing the potential for improved mission success.

Combining launch teams at Cape Canaveral, Florida and Vandenberg AFB, California will help retain the highly qualified and experienced work force so critical for success. The combined team will experience an increased launch tempo. Fifty years of launch experience has demonstrated that increased launch tempo will reduce risk and increase space launch mission success rates. The Department needs to maintain its launch rates at each site for operational continuity and training to reduce the probability of launch failure. Since the Department is not ready to certify that that it can achieve assured access to space with one launch vehicle family, the formation of ULA significantly increases the likelihood that the minimally acceptable launch rate is maintained.

Recent wartime operations demonstrate the increased dependence by warfighters on capabilities provided by space systems. At the highest level, assured access to space is defined as the ability to successfully launch critical space assets when required. A critical component of assured access to space is the availability of these two independent launch systems to avoid the possibility of a single failure denying the nation's access to space. The formation of ULA ensures that both launch vehicle families continue to be available to the DOD, civil, and commercial users while improving both launch vehicle families through the combination of Boeing and Lockheed Martin engineering, manufacturing, and launch teams.